Syllabus for the Two-Year M.Phil Programme in Library and Information Science

(To be effective from the session : 2020 - 2022)

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st (Course Work)	Sem I	M.Phil-101	Research Methodology	4	50
		M.Phil-102	Research and publication Ethics (RPE)	2	25
		M.Phil-103	Digital Library System	4	50
		M.Phil-104	Term Papers & Related Seminar Presentation(s)	4	50 (25+25)
		Sub Total		14	175
	Sem II	M.Phil-201	Digital Information Resources on Library and Information Science	4	50
		M.Phil-202	Information Management and Knowledge Organization	4	50
		M.Phil-203	Term Papers & Related Seminar Presentation(s)	4	50 (25+25)
		Sub Total		12	150
2nd	Sem III & IV	M.Phil-301	Dissertation (Text)	12	150
			Viva-voce	4	50
		Sub Total		16	200
			Grand Total	**42**	**525**

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem I	M.Phil-101	Research Methodology	4	50

Course Code : M.Phil-101
Course Title : Research Methodology

Unit I: Research: Meaning, Design and Methods

Meaning, Need, Types.
Problem formulation, Hypothesis
Designing Research Proposal
Methods - Scientific, Experimental, Historical, Descriptive, Survey
Operations Research in LIS and Projective Techniques

Unit II: Research Data: Collection, Organisation, Analysis and Interpretation

Data Collection Tools and Techniques: Sampling, Observation, Questionnaire, Interview, Schedule
Data Organisation: Tabulation, Graphical representation
Data Analysis and Interpretation: Statistical analysis (Including Frequency Distribution, Measures of Central Tendency, Dispersion, Standard Deviation, Correlation, Regression, Time-Series analysis)
Measurement and Scaling Techniques
Index Number

Unit III: Research Communication and Trends in LIS Research

Writing Research Report: Structure, Style, Contents, and Citation
Close and Open Access Research Publications
Electronic Theses and Dissertations
Trends in LIS Research – Global
Trends in LIS Research – National

Reading List

1. Busha, Charles A. & Harter, Stephen P.: Research Methods in Librarianship: Techniques and Interpretations. New York: Academic Press, 1980.
2. Egghe, L. & Rousseau, R.: Introduction to Informetrics: Quantitative Methods in Library, Documentation and Information Science. Amsterdam: Elsevier, 1990.
3. Glazier, Jack D. & Hall, Peter M., eds.: Qualitative Research in Information Management. Englewood, CO: Libraries Unlimited, 1992.
4. Gorman, G.E. & Clayton, Peter: Qualitative research for the information professional: a practical handbook. 2nd ed. London: Facet Publishing, 1997.
5. Hafner, Arthur W. Descriptive Statistical Techniques for Librarians. 2nd ed. Chicago: American Library Association, 1997.
6. Hernon, Peter & Richardson, John V., eds.: Microcomputer Software for Performing Statistical Analysis: A Handbook Supporting Library Decision Making. Norwood, NJ: Ablex Publishing Corporation, 1988.
7. Kraft, Donald H. & Boyce, Bert R.: Operations Research for Libraries and Information Agencies: Techniques for the Evaluation of Management Decision Alternatives. San Diego: Academic Press, 1991.
8. Losee, Robert M., Jr. & Worley, Karen A.: Research and Evaluation for Information Professionals. San Diego: Academic Press, 1993.
9. Lynam, Peter, Slater, Margaret & Walker, Rennie: Research and the Practitioner: Dissemination of Research Results within the Library-Information Profession. London: Aslib, 1982.
10. Martyn, John & Lancaster, F. Wilfrid: Investigative Methods in Library and Information Science: An Introduction. Arlington, VA: Information Resources Press, 1981.
11. McClure, Charles R. & Hernon, Peter, eds.: Library and Information Science Research: Perspectives and Strategies for Improvement. Norwood, NJ: Ablex Publishing Corporation, 1991.
12. Mellon, Constance A.: Naturalistic Inquiry for Library Science: Methods and Applications for Research, Evaluation, and Teaching. New York: Greenwood, 1990.
13. Moore, Nick: How to Do Research. 2nd ed. London: Library Association,
14. Powell, Ronald R.: Basic Research Methods for Librarians. 3rd ed. Greenwich, CT: Ablex Publishing Corporation, 1997.
15. Prytherch, Ray: Information Management and Library Science: A Guide to the Literature. Brookfield, VT: Gower, 1994.
16. Slater, Margaret, ed.: Research Methods in Library and Information Studies. London: Library Association, 1990.
17. Stephen, Peter & Hornby, Susan: Simple Statistics for Library and Information Professionals. London: Library Association, 1995.

Course Code : M.Phil-102
Course Title : Research and publication Ethics (RPE)

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem I	M.Phil-102	Research and publication Ethics (RPE)	2	25

Course structure

- The course comprises of six modules listed in table below. Each module has 4-5 units.

Modules	Unit title	Teaching hours
Theory		
RPE 01	Philosophy of Ethics	4
RPE 02	Scientific Conduct	4
RPE 03	Publications Ethics	7
Practice		
RPE 04	Open Access Publishing	4
RPE 05	Publication Misconduct	4
RPE 06	Databases and Research Metrics	7
Total		**30**

Course Code : M.Phil-102
Course Title : Research and publication Ethics (RPE)

Theory

- **RPE 01: PHILOSOPHY OF ETHICS (3 hr)**

1. Introduction of philosophy: Definition, Nature and scope, concept, branches
2. Ethics: Definition, moral philosophy, nature f moral judgements and reactions

- **RPE 02: SCIENTIFIC CONDUCT (5 hr)**

1. Ethics with respect to science and research
2. Intellectual honesty and research integrity
3. Scientific misconducts: Falsification an, Fabrication, and Plagiarism (FFP)
4. Redundant publications: Duplicate and overlapping publications, Salami Slicing
5. Selective reporting and mispresentation of data

- **RPE 03: PUBLICATION ETHICS (7 hr)**

1. Publication ethics: Definition, introduction and importance
2. Best practices/standards setting initiatives and guidelines: COPE, WAME, etc.
3. Conflicts of interest

4. Publication misconduct: Definition, concept, problems that lead to unethical behavior and vice-versa, types
5. Violation of publication ethics, authorship and contributorship
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and journals

Practice

- **RPE 04; OPEN ACCESS PUBLISHING (4 hr)**

1. Open access publications and initiatives
2. SHERPA/RoMEO online resource to check publisher copyright & self-achieving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder/journal suggestion tool viz., ZAME, Elsevier journal Finder, Springer journal suggester, etc.

- **RPE 05: PUBLICATION MISCONDUCT (4 hr)**

A. Group discussion (2 hr)

1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: Examples and fraud from India and abroad

B. Software tools (2 hr)

- Use of plagiarism software like Turnitin, Urkund and other open source software tools

RPE 06: DATABASES AND RESEARCH METRICS

A. Databases (4 hr)

1. Indexing databases
2. Citation databases: Web of science, Scopus, etc.

B. research Metrics (3 hr)

1. Impact Factor of journal as per journal Citation report, SNIP, SJR, IPP, Cite Score
2. Metrics: h-index, g index, i10 index, altmetrics

Reading List

Suggested Readings:

1. Adil E. Shamoo, and David B. Resnik, Responsible Conduct of Research, Oxford University Press
2. Gary Comstock, Research Ethics: A Philosophical Guide to the Responsible Conduct of Research, Cambridge University Press
3. Robin Levin Penslar, Research Ethics: Cases and Materials, Indiana University Press
4. Tony Mayer, and Nicholas H. Steneck, Promoting Research Integrity in a Global Environment, World Scientific Publishing
5. Relevant research papers and articles from reputed Journals

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem I	M.Phil-103	Digital Library System	4	50

Course Code : M.Phil-103
Course Title :Digital Library System

Unit I: Historical and Theoretical Foundations

Nature, concepts, scopes, definitions and types of digital libraries
History of digital library initiatives, institutional repositories and open knowledge movement
Social, legal and economic issues
Digital information resources and Digital archiving

Digital information resources – features, types and bitstream formats

Analog (traditional) vs. Digital information resources

Digital archiving – features, advantages and applications

Unit II: Organisation of Digital Objects

Metadata – generic and domain-specific schemas (Including DCMES, GILS, AGLS, ONIX, TEI, IEEE LOM, GEMS, SeamlessUK etc.)

Metadata encoding –

Markup languages – HTML, XHTML, XML

Encoding standards – W3C and IETF standards

Resource Description Framework (RDF)

Resource identifiers (Naming services) – URN, URI, CNRI's handle, PURL, DOI
Subject access systems – standards and tools

Crosswalks and Interoperability

Crosswalks of metadata schemas

Interoperability – OAI/PMH, Z 39.50, ZING and SRW; OAI/PMH Vs. Z 39.50

Design and Development of Digital Library System

Unit III: Architecture, Information Retrieval and User interfaces

Web architecture

Distributed information system (Internet) – architecture, standards,

protocols and tools

World Wide Web – features, services, standards, protocols, tools and services

Web technologies and access systems

Common Gateway Interface (CGI) – architecture and programming tools (PERL, PHP, JSP)

Web databases

Web-enabled DBMS – Relational and Bibliographic DBMS

Technologies, standards and tools

Products and services

Architecture of digital library systems

Design issues

Design principles

Models

Information retrieval in digital library systems

Information retrieval models for digital library systems

Use of vocabulary control devices

Text retrieval tools – types, features and comparisons (Lucene, MGPP, HTDig, SWISH-e)

Search techniques – Boolean, relational and positional operators (including Post Boolean development)

Study of information retrieval features of selected digital library systems

User interfaces of digital library systems

Information seeking behaviour - models

Information access framework

Design issues, principles and standards

Study of user interfaces of selected digital library systems

Multilingual information retrieval system

Reading List

1. Argerich, K.: Professional PHP programming. Mumbai: SPD/Apress Reprints, 2004.
2. Arms, W.: Digital libraries. Cambridge MA: MIT Press, 2000.
3. Bayross, I.: Using Apache, MySQL, PHP and PERL on Linux. New Delhi: BPB Publications, 2000.
4. Bayross, I.: Using MySQL on Linux. New Delhi: BPB Publications, 2004.
5. Bhatnagar, S.: Information and communication technology in development: cases from India. New Delhi: Sage, 2002.
6. Birbeck, M. and Duckett, J.: Professional XML (2 nd ed.). Mumbai: Shrof Publishers, 2004.
7. Borgman, G.L.: From Gutenberg to the global information infrastructure: access to information in networked world. Cambridge MA: MIT Press, 2000.
8. Briggs, A.: The definitive guide to user mode Linux. Mumbai: Shrof Publishers, 2005.
9. Caplan, Priscilla: Metadata fundamentals for all librarians. Chicago: ALA, 2000.
10. Chowdhury, G.G. & Chowdhury, S.: Introduction to digital libraries. London: Facet Publishing, 2003.
11. Crawford, W. and Gorman, M.: Future libraries: dreams, madness, and reality. Chicago: ALA, 1995.
12. Deegan, M. & Tanner, S.: Digital futures: strategies for the information age. London: Library Association, 2003.
13. Fabisoff, S.G., & Ely, D.P.: Information and information needs. Washington D.C: US Office of Education, 1974.
14. Gorman, G.E. & Dorner, D.G.: Metadata applications and management. London: Facet Publishing, 2004.
15. Lesk, M.: Practical digital libraries: books, bytes and bucks. San Francisco: Morgan Kaufmann, 1997.
16. Marchionini, G.: Information seeking in electronic environments. Cambridge: Cambridge University Press, 1995.
17. Meadow, C.T., Boyce, B.R. & Kraft, D.H.: Text information retrieval systems (2 nd ed.). San Diego: Academic Press, 2000.
18. Myers, D.: Professional Java XML programming with servlet and JSP. Mumbai: Shrof Publishers, 2004.
19. Raymond, E. S.: The cathedral and the bazaar: musings on Linux and open source by an accidental revolutionary (Rev. ed). Cambridge: O'reilly and Associates Inc, 2001.
20. Unicode Consortium: The Unicode standard, version 4.1. Reading: Addision Wesley, 2005.
21. Witten, I.H. & Bainbridge, D.: How to build a digital library. San Francisco: Morgan

Kaufmann, 2003.

22. Witten, I.H., Moffat, A. & Bell, T.C.: Managing gigabytes: compressing and indexing documents and images (2 nd ed.). San Francisco: Morgan Kaufmann, 2003.

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem I	M.Phil-104	Term Papers & Related Seminar Presentation(s)	4	25+25 = 50

Course Code : M.Phil-104
Course Title : Term Papers & Related Seminar Presentation(s)

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem II	M.Phil-201	Digital Information Resources on Library and Information Science	4	50

Course Code : M.Phil-201
Course Title : Digital Information Resources on Library and Information Science

Unit I: Generic Digital Information Resources on LIS

Information Resources: Nature, Features and Types
Institute-oriented Digital Information Resources: Including Library Associations, Library Schools, Subject Gateways and Digital Libraries on LIS, Subject Directories in Web, Journal Portals, Publisher's Portals, Book Reviews, Book Selection
Virtual Reference Tools: Commercial Tools (e.g. Xrefer.com), Cross-Publishers Platforms for Reference Sources, Open Access Reference Tools, Yellow pages, White Pages, Library Directories (e.g. LibDex), Dictionaries, Acronyms, Glossary etc.
Socio-Legal Information Sources: IPR related Information, Sherpa-Romeo project, IFLANET – CLM (Copyright and Legal Matters) and FAIFE (Free Access to Information and Freedom of Expression)

Unit II: Interactive Digital Information Resources on LIS

Interactive Digital Information Resources: Nature, Features and Types
LIS Discussion Forums and Mailing Lists (ListServs) – LIS in general and Lists related to

second order divisions (Classification, Cataloguing, Reference, Computer applications, Digital library, Institutional repository etc.)
Blogs and Biblioblogsphere: Nature, Features, Types, Projects and Services
Wikis and Wikipedias in LIS: Nature, Features, Types, Projects and Services
Library 2.0 Tools: Information Mashup, Flickr, YouTube, Social Software

Unit III: Digital Information Resources on LIS Education, Training and Research

LIS Education and Training: Tutorials, Guided Training Programmes, Virtual Classrooms (WebCT, Blackboard etc.), Bibliographies, Reading lists, LIS Courseware, Multimedia Training Kits
LIS Research: Electronic Theses and Dissertations on LIS (NDLTD, LDL, VidyaNidhi, Theses.com etc.), Citation Tools (e.g. CiteSeer), Virtual Union Catalogue (Macro and Micro levels), Research Guides (Proposal, Planning, Design, Budget etc.)
Digital Channels of Research Publications
Virtual Learning Environment (VLE) on LIS

Reading List

18. Carnaby, P: Next generation e-learning and digital information resources. Buenos Aires: IFLA, 2004. <Available at http://www.ifla.org/IV/ifla70/prog04.htm>
19. Casey, M. E. & Savastinuk, L. C.: Library 2.0: Service for the next-generation library. Library Journal, 26. <Available at http://www.libraryjournal.com/article/CA6365200.html>
20. Directory of Open Access Journals (DOAJ): http://www.doaj.org
21. FAO & UNESCO: Digitization and digital libraries module (in CDROM). Rome: FAO, 2005.
22. FAO & UNESCO: Management of electronic documents module (in CDROM). Rome: FAO, 2005
23. Lenhart, A., Fallows, D., & Horrigan, J.: Content Creation Online: 44% of U.S. Internet users have contributed their thoughts and their files to the online world. <Available at http://www.pewinternet.org/pdfs/PIP_Content_Creation_Report.pdf>
24. LIS Core Cluster: http://www.db.dk/
25. LISWiki. Web site: http://liswiki.org/wiki/
26. Maness, J. M.: Library 2.0 Theory: Web 2.0 and Its Implications for Libraries. Webology, 3(2), 2006. <Available at http://www.webology.ir/2006/v3n2/a25.html>
27. Montague, R.: Web-based information science education (WISE). Oslo: IFLA, 2005. <Available at http://www.ifla.org/IV/ifla71/Programme.htm>
28. Stephens, M.: ALA TechSource - Do Libraries Matter: On Library & Librarian 2.0. <Available at http://www.techsource.ala.org/blog/2005/11/do-libraries-matter-on-library-librarian-20.html >
29. TICER courses on digitization: http://www.ticer.nl/
30. Wellman, B., & Haythornthwaite, C. eds.: The Internet in everyday life. Malden, MA: Blackwell, 2002.

31. Wiki: http://en.wikipedia.com/wiki/
32. World list of LIS schools: http://informationr.net/wl/

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem II	M.Phil-202	Information Management and Knowledge Organization	4	50

Course Code : M.Phil-202
Course Title : Information Management and Knowledge Organization

Unit I: Information Sources, Systems and Services

Information sources including digital sources; Information sources Vs. Information resources
Information institutions and information systems; Information Transfer Cycle; Open Knowledge Systems
Information Analysis and Consolidation (IA+C) – methods and products
Digital Information Systems (Including library networks, library consortia, institutional repositories, digital libraries, subject gateways, virtual reference systems, journal portals etc.)
ICT-enabled information services and products (including Personal Information Environment (PIE))

Unit II: Resource Description

Objectives and principles of bibliographic description (including FRBR objectives, Ranganathan's principles, principles of Joint Steering Committee (JSC) and IME-ICC, principles of bibliographic relationships)
Bibliographic data elements and models of bibliographic description (Including ISBDs, FRBR, GARR, FRAD, UKOLN's analytical model, XOBIS etc.)

Bibliographic data standards

Exchange standards – ISO 2709/Z 39.2, MARC-XML, METS, MODS

Content designator / Framework standards – MARC 21, UNIMARC, CCF

Distributed cataloguing standards – Z 39.50, ZING, SRW

Interoperability and crosswalk

Electronic resource description – generic and domain-specific metadata schemas, metadata encoding, metadata harvesting
Trends of resource description and cataloguing
Resource Organisation

Unit III: Information Storage and Retrieval

Subject analysis and representations –

Historical and theoretical foundations

Pre and post coordinate indexing

Evaluation of information retrieval experiments/projects (including TREC)

Automatic indexing systems – file Organisation processes, inverted file, text retrieval systems and software (Lucene, MGPP, HTDig, SWISH-e etc.), search strategies and techniques for CDROM databases and online systems (online databases, digital libraries, institutional repositories etc.), multimedia information retrieval

Vocabulary control devices –

Traditional, digital and integrated (including standards of monolingual (ISO- 2788 / BS 5723) and multilingual (ISO 5964 / BS 6723) thesauri

Design and development of online integrated thesauri (through open source software)

Taxonomy, thesaurus and ontology – comparative study

Models of information retrieval, Information seeking behaviour and User interfaces

Intelligent information retrieval (including natural language processing (NLP) systems and cross-language information retrieval)

Reading List

1. Antoniou, G. & Harmelen, F.V.: A semantic web primer. Cambridge: MIT Press, 2004.
2. Atherton, P.: Handbook for information systems and services. Paris: Unesco, 1977.
3. Baeza-Yates, R. & Riberio-Neto, B.: Modern information retrieval. New York: ACM Press, 1999.
4. Bean, C.A. & Green, R. eds.: Relationships in the organization of knowledge. Drodrecht: Kluwer Academic Publishers, 2001.
5. Bhattacharya, G.: Information sciences: a unified view through a system approach. Calcutta: IASLIC, 1979.
6. Boll, John J.: The future of AACR2. Cataloguing and Classification Quarterly, 12(1), 3-34, 1990.
7. Borgman, C.L.: From Gutenberg to global information infrastructure: access to information in the networked world. Cambridge: MIT Press, 2000.
8. Broughten, V.: Faceted classification as a basis for knowledge organization in a digital environment: the Bliss bibliographic classification as a model for vocabulary management and the creation of multidimensional knowledge structures. The New review of Hypermedia and multimedia, 7(1), 67-102, 2001.
9. Buchanan, B.: Theory of library classification. London: Clive Bingley, 1979.
10. Chen, S.S.: Digital libraries: the life cycle of information. Columbia: BE Publishers, 1998.
11. Craven, T.C.: String indexing. Orlando; Academic Press, 1986.
12. Crawford, W. & Gorman, M.: Future libraries: dreams, madness, and reality. Chicago: American Library Association, 1995.

13. Crawford, W.: Bibliographic displays in online catalogue. London: Knowledge Industry, 1986.
14. CyberDewey: the first well-organized Internet directory. <available at http://www.anthus. com/ CyberDewey/CyberDewey.html>
15. EQUINOX – Library performance measurement and quality management system. <available at http://equinox.dcu.ie>
16. Evans, G.E.: Management techniques for libraries (2 nd ed.), 1993.
17. Flynn, R.R.: An introduction to information science. New York: Marcel Dekker, 1987.
18. Foskett, A.C.: Subject approach to information (5 th ed.), 1996.
19. Fugmann, R.: Subject analysis and indexing: theoretical foundation and practical advice. Frankfurt: Verlag, 1983.
20. Gilchrist, A.: From classification to knowledge organization, 1997.
21. Grogan, D.J.: Science and technology: an introduction to the literature (4 th ed.), 1983.
22. Heaney, M.: Object-oriented cataloguing. Information Technology and Libraries, 14(3), 135-153, 1995.
23. IFLA: Functional requirements for bibliographic records: final report. Munchen: K.G. Saur, 1998 <available at http://www.ifla.org/VII/s13/frbr/frbr.pdf>
24. Lazer, P.: Information system design and management, Sarada Ranganathan lectures, 15, 1982.
25. LibQUAL+ <available at http://www.libqual.org>
26. Machlup, F.: Knowledge: its creation, distribution and economic significance V1: 1980, V2: 1982 & V3: 1984).
27. McGarry, K.J.: The changing context of information (rev. ed.), 1993.
28. Milstead, J.L.: Use of thesauri in the full-text environment <available at http://www.jelem.com/useof.htm>
29. Needham, C.D.: Organization of knowledge in libraries: introduction to library classification and cataloguing (2nd ed.). London: Andre Deutsch, 1971.
30. Salton, G.: Automatic text processing: the transformation, analysis and retrieval of information by computer. Reading, MA: Addison-Wesley, 1989.
31. Seal, A. ed.: Introducing the online catalogue. London: The British Library, 1984.
32. Stuart, R.D. & Eastlick, J.T.: Library management (3 rd ed.), 1988.
33. Svenonius, E.: The conceptual foundations of descriptive cataloguing. New York: Academic Press, 1989.
34. Svenonius, E.: The intellectual foundation of information organization. Cambridge: MIT Press, 2000.
35. Taylor, A.G.: Authority files in online catalogues: an investigation of their value. Cataloguing and Classification Quarterly, 9(3), 29-56, 1998.
36. Tenopir, C.: Use and users of electronic library resources: an overview and analysis of recent research studies. <available at http://www.clir.org/pubs/reports/pub120/ pub120.pdf>
37. Van Rijsbergen, C.J.: Information retrieval (2nd ed.). London: Butterworth, 1979.

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem II	M.Phil-203	Term Papers & Related Seminar Presentation(s)	4	25 + 25 = 50

Course Code : M.Phil-203
Course Title : Term Papers & Related Seminar Presentation(s)

Second Year

Course Code : M.Phil-301
Course Title : Dissertation

Year	Semester	Course Code	Course Title	Credit Value	Total Marks
2nd	Sem III & IV	M.Phil-301	Dissertation (Text)	12	150
			Viva-voce	4	50
		Sub Total		16	200